

GLASS RECYCLING IN WISCONSIN

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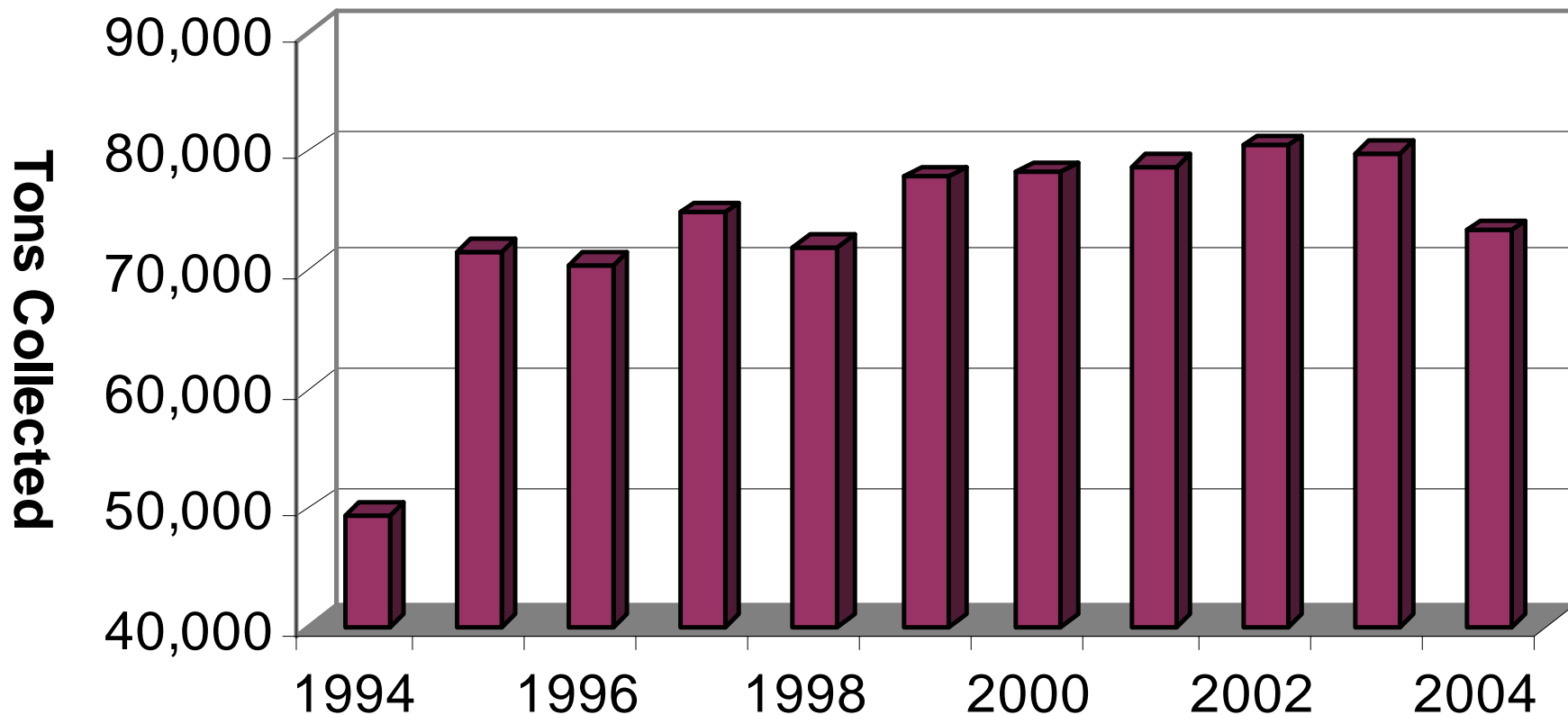
Generation and Recovery

- 191,270 tons/year* - Generated
 - 109,470 tons/year* - Recovered
- 57% Recovery Rate

*Franklin Associates 2000 MSW Characterization and Disposition Results Revised 2003



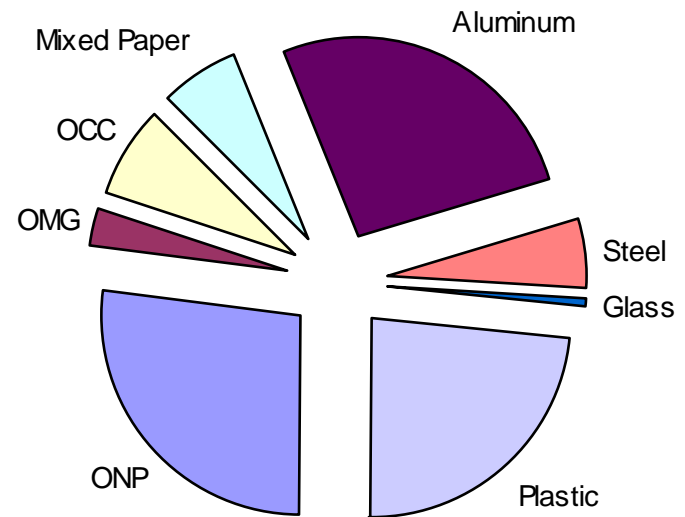
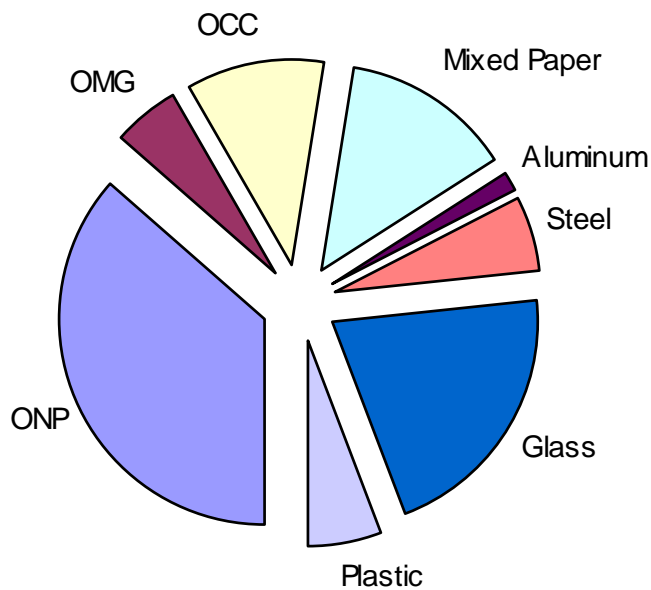
Glass Collected by Responsible Units



Factors Influencing Recycling

- Regulations
 - One of the 15 materials banned from landfills
 - Low Hazard exemptions
- Economics
 - Transportation
 - Local Program and MRF costs
 - Alternative Markets

Composition vs. Value



Product Quality

- Collection Practices
 - Source Separated
 - Dual Stream
 - Single Stream
- Sorting Methods
 - Positive Sorts
 - Negative Sorts







Glass Markets are local



Recovered Glass Uses in Wisconsin

- Cullet – Bottle to Bottle
- Aggregate
- Landfill aggregate uses
- Specialty products

Cullet Markets –Color Sorted

- Saint Gobains Container - Burlington
- Anchor Glass – Shakopee, MN

One Cullet Beneficiation operation

- WM Recycle America – East Troy

Mixed Broken Glass

- Technology exists to sort
- Alternative local uses
 - Glass may need to be improved
 - Still must meet end use specifications
 - Trash must be removed



Glass Aggregate

- Road base, Glassphalt and other engineering applications
- Blast media
- Landscape uses



- Wisconsin Administrative Code exempts glass from solid waste requirements when “glass is processed or used as an aggregate replacement in asphalt pavement and subbase material under roadways” (s. NR 500.08 (2)(f)).

Wisconsin DOT Specification

301.2.3.4 By-Product Materials

- (1) The contractor may provide an aggregate with one of the following by-product materials mixed with crushed gravel, crushed concrete, or crushed stone up to the listed maximum percentage, by weight.

BY-PRODUCT MATERIAL	MAXIMUM PERCENTAGE (by weight)
Glass	12
Foundry slag	7
Steel mill slag	15
Bottom ash	8
Pottery cull	7

- (2) Furnish by-product materials substantially free of deleterious substances.
- (3) Crush, screen, and combine materials to create a uniform mixture conforming to the predominant material specifications.
- (4) If the aggregate contains a by-product material, the department will test the final product for gradation, wear, soundness, liquid limit, plasticity, and fracture as required for the predominant material.
- (5) Do not use aggregate containing a by-product material in the top 3 inches of a temporary or permanent aggregate wearing surface.

Landfill Aggregate Uses

- Road Base Material
- Trench Backfill
- Gas extraction wells
- Alternative Daily Cover



Glass Recycling Forum

- June 22
Portage County MRF
- Discussion among key stakeholders



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